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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|------------------------|------------------|
| 10/691,560 | 10/24/2003 | Koji Horio | MIT-044-USA-P | 7514 |
| 27955 | 7590 | 09/27/2006 | EXAMINER | |
| TOWNSEND & BANTA c/o PORTFOLIO IP PO BOX 52050 MINNEAPOLIS, MN 55402 | | | GOLDBERG, JEANINE ANNE | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1634 | |

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,560

Applicant(s)

HORIO ET AL.

Examiner

Jeanine A. Goldberg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 13 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14, 15, 18 and 20-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14, 15, 18, 22 and 26 is/are rejected.
- 7) ☒ Claim(s) 20, 21, 23-25 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. This action is in response to the papers filed July 13, 2006. Currently, claims 14-15, 18, 20-27 are pending.
2. All arguments have been thoroughly reviewed but are deemed non-persuasive for the reasons which follow. Any objections and rejections not reiterated below are hereby withdrawn.
3. This action contains new grounds of rejection necessitated by amendment.
4. The disclosure is objected to because of the following informalities. The specification addresses various limitations of originally presented Claims. Claims 1-13 have been cancelled and thus the description of the claims is no longer appropriate. The disclosure could be amended to delete reference to specific claims and replace the recitation with "the disclosure teaches." Appropriate correction is required.

Election/Restrictions

5. Applicant's election without traverse of Group II, Claims 14-25 in the paper filed December 19, 2005 is acknowledged.

The requirement is still deemed proper and is therefore made FINAL.

Priority

6. This application claims priority to Japanese application 2002-314333, filed October 29, 2002.

Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119 as follows:

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on October 29, 2002. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).

Further, it is noted that a translation of the foreign document has not been received.

Response to Arguments

The response traverses the rejection. The response asserts that a certified copy of the Japanese application and an English translation are submitted. However, upon review of the file, no submissions appear to have been provided.

Drawings

7. The drawings are acceptable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 14-15, 18, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coleman et al. (US Publication 2002/0160367, October 31, 2002).

Coleman teaches a coated film laminate having ionic surface. Coleman teaches a first board having a front surface, i.e. item 12 of Figure 1. Coleman further teaches a thin polymeric gel film formed on the front surface of the board having depressions and projections, ie. The surface coating may include a hydrogel (para 48). The hydrogel provides a porous surface coating capable of absorbing (para 48). Coleman teaches the coating and laminate are size altered using the application of heat (para 58). Coleman teaches an ablation layer formed on the surface which includes polyethylenes (para 44)(limitations of Claim 15, 22). Coleman teaches a surface coating may be an ionic polymer coating which includes polymers and copolymers made from amine-containing monomers such as 2-vinylpyridine, 3-vinylpyridine, 4-vinylpyridine, (3-

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acrylamidopropyl)trimethylammonium chloride, 2-diethylaminoethyl acrylate, 2-diethylaminoethyl methacrylate, 3-dimethylaminopropyl acrylate, 3-dimethylaminopropyl methacrylate, 2-aminoethyl methacrylate, dimethylaminoethyl acrylate and methacrylate, 2-acryloxyethyltrimethylammonium chloride, diallyldimethylammonium chloride, 2-methacryloxyethyltrimethylammonium chloride, 3-methacryloxy-2-hydroxypropyltrimethylammonium chloride, 3-aminopropylmethacrylamide, dimethylaminoethyl methacrylamide, dimethylaminopropyl acrylamide, and other similarly substituted acrylamides and methacrylamides; 4-vinylbenzyltrimethylammonium chloride, 4-vinyl-1-methylpyridinium bromide, ethylene imine, lysine, allylamine, vinylamine, nylons and chitosan (para 47)(limitations of Claim 18).

Coleman teaches the relaxation and shrinkage of the substrates may be 25%-75% reduction (para 56).

Coleman further teaches that the substrate has oligonucleotides affixed to the substrate to allow subsequent DNA hybridization with the oligonucleotides (para 58).

With regard to the pitches and dimensions of the projections or depressions, Coleman teaches the shrinkage is routinely optimizable based upon the desired parameters. Coleman teaches that the substrate may be shrunk for a reduction of 25%-75% which would encompass projections and depressions having a pitch within the range from 0.1 um to 10um. As noted in *In re Aller*, 105 USPQ 233 at 235,

More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.

Coleman does not specifically teach a second board disposed opposite the thin polymeric film.

However, the ordinary artisan at the time the invention was made would have been motivated to have place the substrate into a holder to allow hybridization assays. The ordinary artisan would have been motivated to have enclosed the substrate to allow control of the environment and containment of buffers, liquids and samples during the reactions.


Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Jeanine Goldberg whose telephone number is (571) 272-0743. The examiner can normally be reached Monday-Friday from 7:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla, can be reached on (571) 272-0735.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The Central Fax Number for official correspondence is (571) 273-8300.


Jeanine Goldberg
Primary Examiner
September 19, 2006